GALVESTON BAY'S URBAN BOTTLENOSE DOLPHINS: UPDATES ON RESIDENCY AND THREAT EVALUATION

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Bottlenose dolphins (*Tursiops truncatus*) inhabiting the Galveston Bay, TX estuary are a research priority for federal natural resource managers. Recurring salinity fluctuations, commercial and recreational fishing pressure, and industrialization make Galveston Bay a unique ecosystem with multiple challenges for its wildlife inhabitants. The Galveston Bay Dolphin Research Program (GDRP) has identified a resident dolphin population within the Bay and aims to advance our knowledge of the population's ecology, health, behavior, and raise public awareness about these dolphins. Dolphins are bioindicators and can be a powerful conservation tool to educate people about environmental issues affecting the Bay. The GDRP has conducted long-term monitoring of the population since 2014 through photo-identification (photo-ID) surveys, remote biopsy darting, passive acoustic monitoring, unmanned aerial surveys, and land-based citizen scientist-led surveys. We have conducted 337 boat-based surveys covering over 29,000 km and sighted over 14,000 dolphins. To date, over 1,000 distinct individuals have been cataloged. Additionally, 56 live-animal tissue samples have been collected, and 71 land-based surveys have been completed. In the upper northwest region of the Bay, approximately 200 individuals have been identified with high site fidelity, and seasonal changes in distribution have been documented with higher abundance of dolphins in warmer months. It is evident that Galveston Bay dolphins interact frequently with Bay-users as 67% of all boat-based sightings have included at least one type of dolphin-human interaction (e.g. patrolling shrimp trawlers). Exposure to freshwater runoff poses an important threat to the resident population, as many dolphins develop skin lesions, indicating physiological stress, following heavy precipitation events. Continued monitoring of this resident population is important for evaluating their resilience to living in this dynamic and evolving environment. Our ongoing research will inform management decisions about this federally protected population and will provide data on their health and survival that can reveal knowledge about the overall health of Galveston Bay.